Abstract

The invention relates to a measuring device (1) for the conditioning, output and forwarding of sensor signals in the context of a liquid and/or gas analysis. The measuring device (1) includes a housing (14) of an electrically conductive material, in a wall of the housing (14) at least one cable gland (17, 18) for a shielded sensor signal line (20) for the transmission of the sensor signals, and an electrically conductive connection between a shielding (21) of the sensor signal line (20) and the housing (14). In order to make the measuring device (1) as insensitive as possible to interferences and thereby to improve the accuracy and reliability of the measuring device (1), the, or each, cable gland (17, 18) has regions of an electrically conductive material and means (32) for the electrical contacting of the regions both with the shielding (21) of the sensor signal line (20) and with the housing (14) and the regions serve for creating an electrically conductive connection between the shielding (21) of the sensor signal line (20) and the housing (14). Preferably, the body of the cable gland (17, 18) is made of metal. Additionally, it is provided that all circuit portions of the measuring device are decoupled using optocouplers (10, 41) or converters. (Fig. 1)

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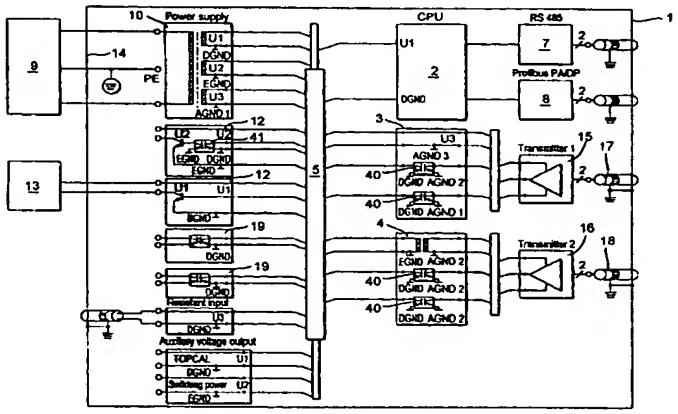
(54) **Title:** MEASURING DEVICE FOR THE ANALYSIS OF LIQUIDS AND/OR GASES

(54) **Bezeichnung:** MESSEINRICHTUNG FÜR DIE FLÜSSIGKEITS- UND/ODER GASANALYSE



(57) **Abstract:** The invention relates to a measuring device (1) for the preparation, output and transmission of sensor signals for the analysis of liquids or gases. The measuring device (1) comprises a housing (14) made of an electrically conductive material, at least one cable lead-through (17,18) disposed in a wall of the housing (14) for a shielded sensor signal line (20) in order to transmit the sensor signals, and an electrically conductive connection between the sheath (21) of the sensor signal line (20) and the housing (14). In order to make the device as little sensitive as possible with respect to disturbances and in order to improve the accuracy and reliability of said measuring device (1), each cable lead-though (17, 18) is provided with areas which are made of an electrically conductive material and means (32) for the electrical contacting of said areas to the sheath (21) of the sensor signal line (20) and the housing (14),whereby the areas are used for the production of the electrically conductive connection between the sheath (21) of the sensor signal line (20) and the housing (14).Preferably, the body of the cable lead-through (17, 18) is made of metal. All partial circuits of the measuring device are decoupled by means opto-couplers (10, 41) or transformers.

(57) **Zusammenfassung:** Die Erfindung betrifft eine Messeinrichtung (1) zur Aufbereitung, Ausgabe und Weiterleitung von Sensorsignalen im Rahmen einer Flüssigkeits- und/oder Gasanalyse. Die Messeinrichtung (1) umfasst ein Gehäuse (14) aus einem elektrisch leitfähigen Material, in einer Wand des Gehäuses (14) mindestens eine Kabeldurchführung (17, 18) für eine geschirmte Sensorsignalleitung (20)

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